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**United States Patent** [19]

Blum

[11] **Patent Number:** 6,132,724[45] **Date of Patent:** Oct. 17, 2000[54] **ALLELIC POLYGENE DIAGNOSIS OF  
REWARD DEFICIENCY SYNDROME AND  
TREATMENT**[75] **Inventor:** Kenneth Blum, San Antonio, Tex.[73] **Assignees:** City of Hope National Medical  
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Regents, Austin, Tex.[21] **Appl. No.:** 09/069,886[22] **Filed:** Apr. 29, 1998[51] **Int. Cl.<sup>7</sup>** ..... A61K 35/78[52] **U.S. Cl.** ..... 424/195.1; 514/188; 514/561[58] **Field of Search** ..... 514/188, 561;  
424/195.1[56] **References Cited****U.S. PATENT DOCUMENTS**

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[57] **ABSTRACT**

Enhancement of attentional processing is attained by administration of an endorphinase inhibitor or enkephalinase inhibitor and optionally, a dopamine precursor, or a serotonin precursor, a GABA precursor, or an endorphin or enkephalinase releaser, or certain herbal compounds including *Rhodiola rosea* extract (Pharmaline) and/or Huperzine. These components promote restoration of normal neurotransmitter function and the components combined enhance the release of dopamine at the nucleus accumbens and are non-addictive. Use of the dopamine precursors L-phenylalanine, or L-Tyrosine, the enkephalinase inhibitor D-phenylalanine, and/or the serotonin precursor -hydroxytryptophan and a natural acetylcholinesterase inhibitor and chromium salts (i.e. picolinate, nicotinate, etc.) is especially preferred, but not limited to assist in relieving symptoms associated with brain phenylalanine deficiency.

9 Claims, 8 Drawing Sheets